Notice of Allowability	Application No.	Applicant(s)	
	10/625,557	KIGO ET AL.	
	Examiner	Art Unit	
	Alexander S. Beck	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *communications filed on 19 October 2007*.

2. ☒ The allowed claim(s) is/are *23-27*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of the amendment filed by the applicant on Oct. 19, 2007, in which: claims 14-22 are cancelled; claims 23-25 are amended; and new claims 26 and 27 are added. Claims 23-27 are currently pending and an Office action on the merits follows.

Allowable Subject Matter

2. Claims 23-27 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Kanazawa discloses a driving circuit in Figure 4 that drives a display panel having an electrode (Y1), comprising: a first switching element (SW14) that supplies a charge from a recovering capacitor (C2) to the electrode (Y1) of the display panel; and an interconnector (e.g. where inductive element L2 connects with diodes D14 and D15) connected to the first switching element (SW14) through a first one-way conductive element (D14) (Kanazawa, col. 7, ll. 31-55). The driving circuit includes: a second switching element (SW15) that recovers the charge from the electrode (Y1) of the display panel to said recovering capacitor (C2); and a second one-way conductive element (D15) provided between said second switching element (SW15) and said interconnector (Kanazawa, col. 7, ll. 59-67). A frequency reducer (e.g., positive diodes connected reversely and in parallel between the drains and sources of the switches/transistors SW14 and SW15) is connected in parallel with said first switching element (SW14), that is operable to reduce a resonance frequency of an LC resonance resulting from a parasitic capacitance of the first switching element (SW14), and the inductance component (L2) of the interconnector, wherein the charge is supplied to the electrode (Y1) of the display

panel from said recovering capacitor (C2) through said first switching element (SW14) and said interconnector. While Kanazawa does not disclose expressly wherein the diodes connected reversely and in parallel between the drains and sources of switches SW14 and SW15 are frequency reducers, it is well within the knowledge and skills of those of ordinary skill in the art that the diodes possess such properties as capacitances; and if added to the parasitic capacitances of the switches, the resonance frequency resulting from the parasitic capacitance of the switches would be reduced.

Lai discloses resonant Snubber-based soft-switching inverters for electric propulsion drives, and a method of avoiding EMI with other vehicle components. Specifically, capacitors (Cr) are connected to the switches in parallel as lossless snubbers in order to allow a zero-voltage turn-off and to slow the voltage rise rate (dv/dt) (Lai, p. 75 regarding *Mode 2*).

However, as to claims 23-25, none of the prior art made of record teaches or suggests a frequency reducer connected in parallel with a switching element that is operable to reduce a resonance frequency of an LC resonance resulting from a parasitic capacitance of the switching element and an inductance component of an interconnector, wherein the frequency reducer has a capacitance of approximately five to ten times as much as that of the parasitic capacitance of the switching element, to suppress unwanted electromagnetic wave radiation of 30 MHz or higher, as presently claimed.

Moreover, as to claim 26, none of the prior art made of record teaches or suggests an interconnector connected between a first switching element and a plasma display panel, a first capacitive device that connects a first voltage source to the interconnector in parallel with the first switching element, a second capacitive device that connects a second voltage source to the interconnector in parallel with a second switching element, a third switching element connected to a recovering capacitor, wherein when the third

switching element is turned on, a potential of the interconnector rises and starts to fall from a peak voltage, and thereafter the first switching element is turned on, so that the potential of the interconnector becomes equal to a potential of the first voltage source, as presently claimed.

Furthermore, as to claim 27, none of the prior art made of record teaches or suggests an interconnector connected between a first transistor and a plasma display panel, a first capacitive element connected between a drain and a source of a first transistor, a second capacitive element connected between a drain and a source of a second transistor, a third transistor connected to a recovering capacitor, wherein when the third switching element is turned on, a potential of the interconnector rises and starts to fall from a peak voltage, and thereafter the first switching element is turned on, so that the potential of the interconnector becomes equal to a potential of the first voltage source.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander S. Beck whose telephone number is (571) 272-7765. The examiner can normally be reached on M-F, 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

asb
Dec. 28, 2007

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER